REVISION HISTORY			
Rev	**Description of Change**	**Author**	**Effective Date**
0	Initial Release	M. Walsh	6/17/98
1	Changes were caused from 1st Internal Audit findings of actual practices. Major rewrite. Refer to DCR 98-001.	B. Navarro	7/17/98
2	Clarifications based on 7/98 DNV Audit and 6/98 Internal Audit (see DCR 98-006). Major rewrite.	M. Hines	9/2/98
3	Add to section 6.1 & revise 3 subject in item 7 of Appendix A	R. Carvalho & R. Stroub	10/2/98
4	Added * designee to section 5.2.1, Removed the following statement “and forward DCR to package to the DCA.” From 6.1.2.3 & 6.1.4.4	R. Serrano	11/13/98
5	Clarifications based on 11/98 DNV Audit (DCR 98-054)	R. Serrano	12/18/98
6	Added to section 6.5 and Appendix A, para 9a “available,” “on the following web sites and include, but are not limited to,” “Software Guidebooks and Standards at http://www.ivv.nasa.gov/SWG/resources, etc.” Added to Appendix A, para 10 “controlled by either a date or revision level noted on the form.” (DCR 99-008)	R. Serrano	4/21/99
7	Clarifications based on Internal Audits and 4/99 DNV Audit (DCR 99-021)	G. Miyahara	8/2/99
8	Clarification based on CAR #ARC-00595 (DCR 99-030)	G. Miyahara	9/7/99
9	Clarification based on CAR #ARC-00775 (DCR 00-010) Appendix A, section 6 and added definition of CWDCA	J. Weller	5/4/00

REFERENCE DOCUMENTS	
Document Number	**Document Title**

53.ARC.0000	Ames Research Center Quality Manual, Section 4.5
53.ARC.0005.1	Document and Data Control Work Instruction for DCAs
53.ARC.0005.2	Creation of Quality System Procedures and Instructions

Documents referenced in this procedure are applicable to the extent specified herein.

1. Purpose

This procedure defines the implementation of a document and data control system in accordance with the Ames Research Center (ARC) Quality Manual. This procedure defines the method for preparing, reviewing, approving, maintaining, tracking, and changing documents and data identified on the Master List.

2. Scope

This procedure applies to the control of documents and data pertaining to the ARC Quality System. The ARC Quality Manual, Centerwide System Level Procedures (SLPs), Directorate-Level procedures, and associated forms shall follow this procedure.

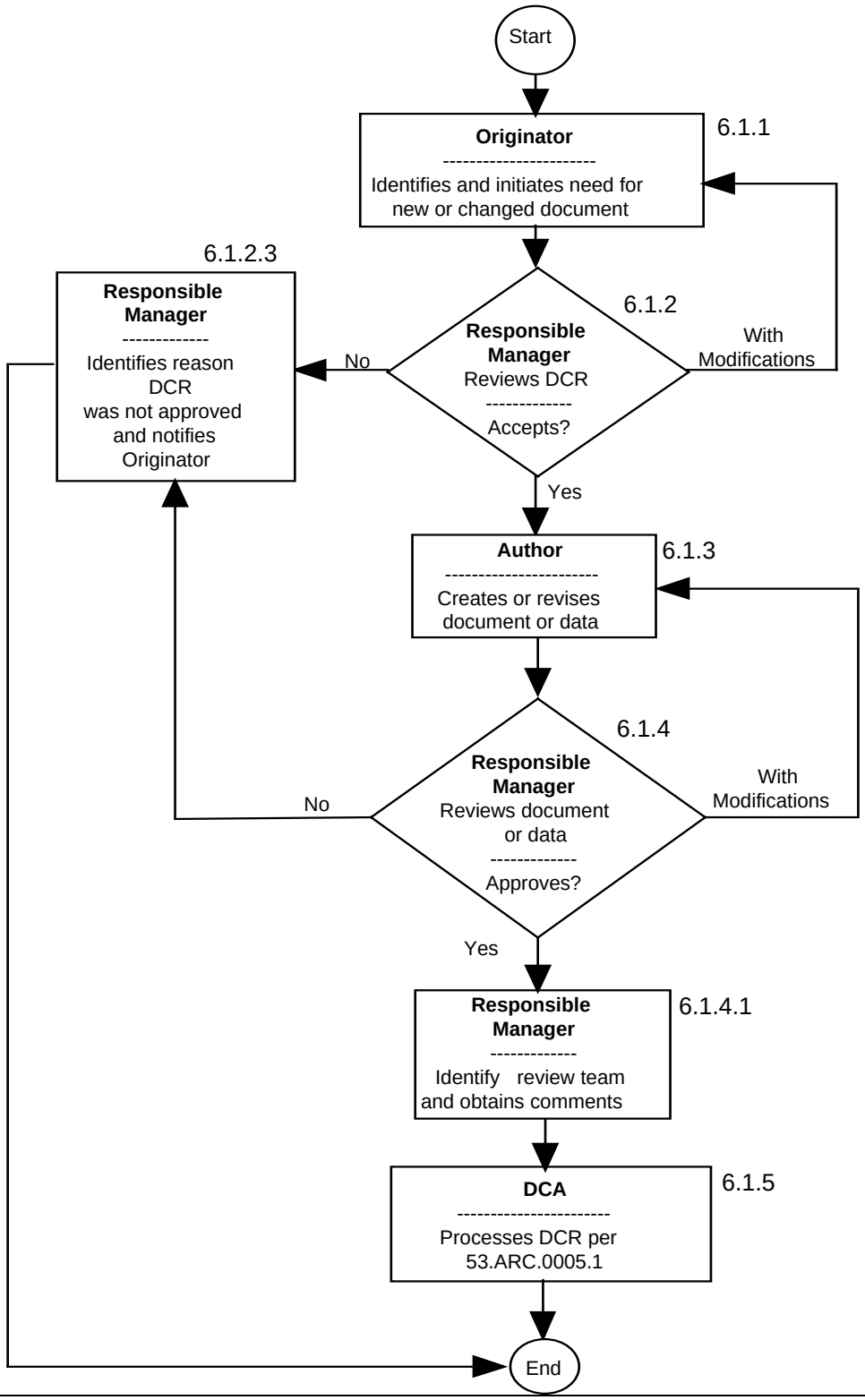
All other ARC Quality System procedures, work instructions, forms, data and document control systems shall, as a minimum, satisfy the "General Requirements" defined in Appendix A of this procedure. However, it is recommended that the entire procedure be followed whenever practical.

3. Definitions and Acronyms

3.1	Administrative Change	Any clerical change to a document or data which does not impact its basic intent (i.e. grammatical, template formatting, typo-fixes, etc.)
3.2	Author	Person designated to create or revise a document or Quality System data
3.3	Centerwide Document Control Administrator (CWDCA)	Person responsible at the center-wide level for control of the ARC Quality Manual, Centerwide System Level Procedures (SLPs), and associated forms.
3.4	Data	Quality System information used to control the process that affects the final product (e.g. reference values, benchmarks)

3.5	Document	Quality System procedure, work instruction, manual, or associated form which is used to control the processes that affect the quality of the final product
3.6	Document Change Request (DCR)	Form used to create or change a document (ARC 760)
3.7	DCR Package	DCR (ARC 760) and any supporting documentation (i.e., document, flowchart, etc.)
3.8	Document Control Administrator (DCA)	Person responsible at any organizational level for control of documents and data that affect only that organization
3.9	External Document and Data	Quality System documents and data not generated at ARC
3.10	Master List	List which identifies the Quality System documents and data and includes current revision status
3.11	Originator	Person(s) who initiates a DCR
3.12	Responsible Manager	Person having the responsibility and authority to accomplish/implement a specific activity or process (includes organizational line managers, project managers, etc.)
3.13	Signature/Sign	Handwritten, electronically written, or electronically typed name of an individual that indicates an act of approval, disapproval, review, etc.

4. Flowchart


Start
Originator
Identifies and initiates need for new or changed document
6.1.1
Responsible Manager
Reviews DCR
Accepts?
6.1.2
No
With Modifications
Responsible Manager
Identifies reason DCR was not approved and notifies Originator
6.1.2.3
Yes
Author
Creates or revises document or data
6.1.3
Responsible Manager
Reviews document or data
Approves?
6.1.4
No
With Modifications
Yes
Responsible Manager
Identify review team and obtains comments
6.1.4.1
DCA
Processes DCR per 53.ARC.0005.1
6.1.5
End

5. Responsibilities

5.1 **Centerwide Document Control Administrator** (CWDCA) shall:

- process, control, and coordinate new or revised centerwide documents and data. (This includes the tracking, status, maintenance, and distribution of information relating to controlled documents and data comprising the Quality System).
- provide document change control training and communications, and
- coordinate and receive direction from the ISO Project Manager regarding the ARC ISO 9000 web site.

5.2 **Document Control Administrators** (DCAs) shall:

- process, control, and coordinate new or revised Directorate-level and lower-level documents and data.

5.3 **Responsible Manager** shall:

- identify a method for tracking external documents and data which are used to control and define the processes that affect the quality of the final product,
- designate which managers are responsible for review and approval of documentation and data,
- ensure the effective implementation of a document and data control system within their organizations, and
- review and approve DCR package prior to submittal to the appropriate DCA.

5.4 **ARC Quality System Management Representative** or designee shall:

- approve all center-level documentation and data.

5.5 **Document Users** shall:

- check the Master List to verify that the document and/or data being used is the current version.

6. Procedure

6.1 Change Control Process

This process applies, as a minimum, to the ARC Quality Manual, SLPs, Directorate-level procedures, and associated forms.

6.1.1 Originator obtains a DCR form (ARC 760), from http://dqa.arc.nasa.gov/iso9000 and fills out the appropriate section using either an electronic or a hardcopy version. Originator contacts appropriate DCA to assist in identifying the Responsible Manager when necessary. The Originator forwards the DCR package to the Responsible Manager.

6.1.1.1 For creations and revisions, the DCR package should include the DCR and any supporting documentation, or

6.1.1.2 For administrative changes, the DCR package should include the DCR, a redline of the original document or data, and any supporting documentation, or

6.1.1.3 For cancellations, the DCR package should include only the DCR.

6.1.2 The Responsible Manager or designee shall contact the appropriate DCA for a DCR number, review the DCR and perform one of the following actions:

6.1.2.1 If accepted, assign an Author to write or revise the proposed document or data, sign the DCR, and forward the DCR package to the Author, or

6.1.2.2 If revisions to the DCR are required, return the DCR package to Originator for modification, or

6.1.2.3 If not accepted, identify the reason DCR was not accepted, and notify Originator.

6.1.3 The Author shall create or revise the document or data (documents shall be created or revised in accordance with 53.ARC.0005.2). When finished, the Author shall submit the DCR package and proposed document or data to the Responsible Manager for review and approval.

6.1.4 The Responsible Manager or designee shall review the proposed document or data and perform one of the following actions:

6.1.4.1 If approved, sign the DCR and forward DCR package and proposed document or data to the appropriate DCA.

If further review is required before deciding to approve or reject the proposed document or data, the Responsible Manager shall identify required review members and obtain their comments.

6.1.4.2 If revision is required, return the DCR package and proposed document or data to the Author for modification, or

6.1.4.3 If not accepted, identify the reason proposed document or data was not accepted and notify Originator by returning DCR package to Originator.

6.1.5 The DCA shall process the DCR in accordance with 53.ARC.0005.1.

6.1.6 A new document number is assigned to Originator by the appropriate DCA. Once a document number has been assigned and the document approved and placed on the Master List, the document number cannot be re-issued. When a document is cancelled, the cancellation is indicated on the Master List with the cancellation date.

6.2 Master List and Controlled Documents

6.2.1 All document or data users shall check the Master List to verify that a downloaded or hardcopy version of a document or data is the correct version.

6.2.2 The Master List of Quality System documents and data is available at the ARC ISO 9000 web site, http://dqa.arc.nasa.gov/iso9000. Complete electronic versions of the documents can also be accessed from the web site. The versions on the web site are the official controlled documents and any downloaded or printed hardcopy is uncontrolled.

6.3 ARC ISO 9000 Web Sites

Requests for changes to the Centerwide ISO web site will be forwarded to the CWDCA via e-mail or handwritten means. The CWDCA will discuss the changes with the ISO Project Manager or designee to determine acceptance and direction and then implement accordingly. Changes to Directorate ISO web sites will be handled by the appropriate DCA.

6.4 Document Revision Control

Revisions to Quality System documents are depicted by a revision number or letter appended to the document number. Successive revisions to documents shall use the next sequential number or letter. Initial release of a document may have no revision indicated or may have revision “0” (zero) indicated.

6.5 External Documents

External documents referenced in the Quality Manual and the SLPs are available on the following web sites and include, but are not limited to the following:

- NASA On-line Directives Information System (NODIS) at http://nodis.hq.nasa.gov,
- Software Guidebooks and Standards at http://www.ivv.nasa.gov/SWG/resources, etc.

Users of such documents are responsible for verifying that they are using the correct version by checking the documents on the appropriate web site. If they have the incorrect version, they are responsible for ensuring that it is not

inadvertently used.

7. Metrics

There are no metrics required for this document.

8. Quality Records

There are no Quality Records required for this document.

9. Form(s)

Forms required for this document:

Form Number	Title
ARC 760	Document Change Request

Appendix A

General Requirements - All quality document and data control systems shall address the following requirements:

1. New documents and data and changes to existing documents and data are reviewed and approved for adequacy by the Responsible Manager before release.

2. Changes to documents and data may be proposed by anyone in the organization but may only be released if authorized as defined in approved procedures.

3. Changes to documents and data are reviewed and approved by the same organization or functional area that performed the original review and approval, unless specifically designated otherwise. Reviewers shall have access to all pertinent information necessary to review changes. The nature of a change shall be identified within the document or data.

4. All documents and data shall be legible, dated, readily identifiable with unique numbers, titles, and revision levels, and maintained in an orderly manner.

5. Documents and data shall be readily available to all persons within the organization, unless otherwise specified.

   Users of such documents are responsible for verifying that they are using the correct version by checking the documents on the appropriate web site. If they have the incorrect version, they are responsible for ensuring that it is not inadvertently used.

6. Any document with a document number and revision level that does not match the current version as designated on the Master List is considered invalid or obsolete. Invalid or obsolete documents and data may be kept for historical reference or knowledge preservation purposes. Downloaded or printed hardcopies are considered uncontrolled. Marking old versions of documents as “obsolete”, “superceded”, etc. will be marked.

7. Master Lists from all document and data control systems shall link to the ARC Centerwide Master List.

8. Control of external documents and data consists of ensuring that appropriate versions are available to users. Document and data control procedures shall explain how external documents are identified, controlled to ensure that appropriate versions are available and removed from service when obsolete. Use of web sites that contain standards and external documents, such as NASA, industry, military, etc., is recommended as a means for identifying the correct version of external documents. Documents and data of external origin are not included on the ARC Centerwide Master List.

   8a. The latest approved NASA agency documents (e.g. policies, directives) are available on the following web sites and include, but are not limited to the

following:

- NASA On-line Directives Information System (NODIS) at http://nodis.hq.nasa.gov,
- Software Guidebooks and Standards at http://www.ivv.nasa.gov/SWG/resources, etc.

8b. Military specifications, industry standards, Federal Aviation Administration standards, etc. are available at http://www.hq.nasa.gov/iso/ihs/ihs.htm.

9. Forms described in or associated with Quality System documents shall be controlled. Forms may be listed separately or they may be embedded in documents on the Master List. Each form shall be controlled by either a date or revision level noted on the form. Forms that are available in electronic format may also have an “E” next to the form identification.